

Category	Antibiotics	Gene	Protein	Mechanism	Reference
Sulfonamides	Sulfamethoxazole	cpo	CPO	catalytic oxidative degradation of sulfamethoxazole by CPO-H ₂ O ₂	http://onlinelibrary.wiley.com/doi/10.1002/jctb.4888/abstract
β-lactam antibiotics	carbapenem; cephalosporin; cephalexin; penicillin	bla(KPC-1)	KPC-1	Class A beta-lactamase. This enzyme breaks the beta-lactam antibiotic ring open and deactivates the molecule's antibacterial properties.	http://aac.asm.org/content/45/4/1151.long
Aminoglycoside	Streptomycin	aac	aminoglycoside acetyltransferase	Aminoglycoside N-acetyltransferase, which modifies aminoglycosides by acetylation.	http://link.springer.com/protocol/10.1007%2F978-1-59745-246-5_20
		aph	aminoglycoside phosphotransferase(3')-IIIa (28) (APH)	Aminoglycoside O-nucleotidyltransferase, which modifies aminoglycosides by adenylation.	
		ant	Aminoglycoside nucleotidyltransferase	Aminoglycoside O-phosphotransferase, which modifies aminoglycosides by phosphorylation.	
Macrolide	Erythromycin	ereA	EreA	enzymatic hydrolysis of the macrolactone ring catalyzed by erythromycin esterases	http://pubs.acs.org/doi/abs/10.1021/bi201790u?mi=0&af=R&pr...=&
Amide alcohol	Chloramphenicol	cat	chloramphenicol acetyltransferase (CAT)	Group A chloramphenicol acetyltransferase, which can inactivate chloramphenicol.	https://www.ncbi.nlm.nih.gov/pubmed/2541053